ABSTRACT OF DISCLOSURE

Detecting a wildfire and an electrical arc, which are characterized by emission of ultraviolet (UV) radiation at a given wavelength, are described using a light sensor having a pulse output responsive to the given wavelength and generating an intermediate output responsive to the pulse output in a way which tracks a trend in the pulse output, irrespective of any increase in the relative number of pulses in the pulse output that is responsive to extraneous sources other than wildfire or electrical arc. The intermediate output is generated responsive to pulses occurring within an event window that continuously terminates at present time and extends backward therefrom by a selected time duration. An alarm signal is produced based on a predetermined characteristic of the intermediate output. Packaging of the sensor and alarm arrangement is described along with photo-detection tube optimization. Further, atmospheric transmission of the detected wavelength is described.